

**REMARKS/ARGUMENTS**

Reconsideration of this application is respectfully requested.

In response to the claim objections for claims 1-59, 63-64 and 66, the claims have been amended above so as to obviate each of the Examiner's stated grounds for objection.

In response to the provisional rejection of claims 34 and 35 on the ground of non-statutory obviousness-type double patenting, *vis-à-vis* claims 36 and 37 of U.S. Application 10/549,750, these claims have been cancelled above thus mooting this ground of rejection.

In response to the rejection of claims 24, 33, 55-62 and 65-66 under 35 U.S.C. §112, second paragraph, these claims, to the extent they still exist, have been amended so as to obviate each of the Examiner's stated grounds of objection/rejection.

The rejection of claims 61-66 under 35 U.S.C. §101 as allegedly directed to non-statutory subject matter has been mooted by the cancellation of these claims.

Claim 1 has been amended to recite the features of the behavioral framework comprising nodes arranged to perform both a forwards and backwards map to derive global parameter values (e.g., see Fig. 6 when at least one node 62 provides global framework parameters; see also Fig. 5 and text at 19:6-24, 26-30).

Claim 3 has been amended to recite the feature that at least one behavioral node is arranged to receive input from one of three sources (e.g., see text at 15:25-26; 21:11-17 and Fig. 6).

New claim 67 is based on previous claim 3 but recites the feature of at least one behavioral node being arranged to provide output to both another object as well as output which enables the behavior of the object to the animated object (e.g., see Fig. 6 and text at 19:10-11; 17-21). Claim 6 has been amended to indicate that a reverse map is performed to generate

additional behavior. Claim 11 has been amended for consistency. Claim 12 has been amended for consistency. Claim 29 has been amended into a dependent form.

Claim 42 is an independent claim directed towards a behavioral controller having means consistent with claim 1 as amended. Claim 43 has been amended for consistency. Claim 50 has been amended to clarify that the translation element is for body language behavior.

The rejection of claims 1, 5-12, 15-20 and 22-66 under 35 U.S.C. §102 as allegedly anticipated by Sato is respectfully traversed.

Independent claims 1 and 43 now include a behavioral controller comprising a framework of nodes, at least one node being arranged to map its input to provide output to other nodes in the framework in both a forwards or backwards direction whereby each behavioral movement is implemented by parameter values contributed by a plurality of nodes.

The ability of the framework to perform a reverse map as well as a forwards map means that if someone provides input to the output side of the framework, values can be propagated backwards through the map to seed the global parameter nodes of the framework so these update the global parameter values they provide to other nodes of the framework (see specification at 34:1-7), which in turn collectively influence a resulting behavioral action by contributing weightings to a behavioral action output node.

Sato describes only the propagation of output from one actor to another actor's input to generate equivalent behavior. In Sato, this input is then processed using the existing behavioral model to generate equivalent behavior by the reciprocating actor. The applicant's invention, in contrast, modifies other behavioral node parameter values and its global parameter values by performing a backwards map. This enables one receiving "actor" to react in a different way to

the input than another actor would, depending on the configuration of the actions framework as this would affect the way the reverse map was performed.

Nothing in Sato would teach a person of ordinary skill in the art to modify the way an individual actor reacts by performing a reverse map through an internal behavioral framework.

Given such fundamental deficiencies of Sato with respect to the independent claims, it is not believed necessary to discuss further deficiencies of Sato with respect to other features of the independent claims or additional features of the rejected dependent claims. Suffice it to note that, as a matter of law, it is impossible for a claim to be anticipated by any reference unless that reference teaches each and every feature of the claim.

The rejection of claims 2-4 and 13-14 under 35 U.S.C. §103 as allegedly being made “obvious” based on Sato in view of Ball ‘502 is also respectfully traversed.

Fundamental deficiencies of Sato have already been noted above with respect to parent claims. Ball does not supply those deficiencies. Accordingly, it is not believed necessary to discuss further deficiencies of this allegedly obvious combination of references with respect to the additional features of the rejected claims.

The rejection of claim 21 under 35 U.S.C. §103 as allegedly being made “obvious” based on Sato in view of Hatlelid ‘333 is also respectfully traversed.

Deficiencies of Sato have already been noted above. Hatlelid does not supply those deficiencies and has additional deficiencies as explained below.

Hatlelid describes a string-based text-input system for indicating behavior to accompany verbal utterances. For example, the following utterance: “(flamboyant)(100) Hello(wink), how are you?” comprises text with a gesture and personality and mood override. When a user inputs an utterance a text-to-phoneme and punctuation analysis of the utterance is performed to

generate nodes, so that for the above statement seven nodes are created "hel", "loh", "heh", "ow", "are", "yeh", "oo"). Each node in the choreography sequence represents a behavioral movement. The data string of the user inputted utterance is parsed for gesture commands which are either linked to existing choreography sequence nodes or to entirely new nodes as needed. However, it is clear from Hatlelid that each "node" individually represents a behavioral movement.

Hatlelid discloses how a number of nodes may be assigned parameter values from input associated with behavior, but nothing in Sato describes a framework in which both a forwards and a reverse map is performed to infer internal parameter values for behavioral nodes and global parameter nodes so that a plurality of nodes collectively contribute values to influence the output of behavioral nodes. It is clear that Sato only contemplates text string input in which a user specifies an action to be performed from which behavior is adduced.


Nothing in Hatlelid teaches a person of ordinary skill in the art to consider providing a framework for the nodes which would enable more complex behavior to be generated in the manner of applicant's invention (which modifies the parameter values assigned to each node of the framework by propagating parameter values through the framework in both a forwards and reverse direction), so that a plurality of nodes provide input to a behavioral node.

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Accordingly, this entire application is now believed to be in allowable condition and a formal notice to that effect is respectfully solicited.

Respectfully submitted,

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